GeoTechnologies, Inc.
Geotechnical and Construction Materials Testing Services

October 28, 2008

Mr. Anthony Mancari, P.E.
Department of Engineering
City of Rocky Mount, NC
P. O. Box 1180
Rocky Mount, NC 27802

Reference: Pavement Evaluation for Streetscape Project
Rocky Mount, North Carolina
GeoTechnologies Project No. 1-08-0569-CA

Dear Sir:

GeoTechnologies has performed the authorized investigation of pavement conditions along Main Street in Rocky Mount, North Carolina for a proposed streetscape project. The purpose of the investigation was to determine pavement depths and subgrade conditions at ten (10) locations specified by the City of Rocky Mount. The pavements were cored with a diamond impregnated coring bit at each test location. All borings were patched as they were completed. A summary of conditions found at each test location is attached as Table 1.

TEST LOCATIONS

A total of 10 areas, designated by the City of Rocky Mount, were cored in order to determine pavement depths and types. Those locations include the following.

1) SW Main just north of the Nash Street intersection
2) SE Main midway between Battle and Marigold Streets
3) SE Main just north of Marigold Street
4) SW Main north of Sunset Avenue
5) SE Main just north of Tarboro Street
6) Falls Road just north of W. Thomas Street
7) NE Main on the east side of the median across from Washington Street
8) E Thomas St midway between NE Main and Albemarle Avenue
9) Falls Road midway between W. Thomas and Goldleaf Street
10) NE Main midway between E. Thomas and Goldleaf Street

CONDITIONS

All streets in the evaluation are paved with asphalt pavement. The thickness of the asphalt pavement ranged from 1.75 to 9.5 inches. The majority of the asphalt pavement consisted of fine graded

surface mixes although binder courses were observed where thicknesses exceeded 5 inches. The asphalt surface was underlain by three different pavement materials.

Tar Macadam was encountered beneath the asphalt pavement at locations 3, 4, 5, 6, and 9. This product was used extensively in the United States prior to 1960. Tar Macadam consists of a layer of coarse aggregate, typically 2.5 to 3 inch maximum size that has been bound together with liquid tar or liquid asphalt. Tar Macadam is typically very stable and was likely the original street surface in those locations where it was encountered.

Concrete pavements were encountered beneath the asphalt pavement at locations 1, 7, 8, and 10. Thickness of the concrete ranged from 3.5 to 6 inches. The coarse aggregate in the concrete pavement consisted of a crushed granite aggregate with a maximum particle size of 2.5 inches.

Aggregate base course stone was encountered at location 2. The base course consisted of a crushed granite aggregate with a maximum particle size of 1.5 inches.

At borings 7 and 9 we encountered hand auger refusal at a depth of 14 inches beneath the pavement surface. We suspect that the refusal was met on top of underground utility structures.

The soils encountered beneath the pavement structure consisted of sandy clays (CL), silty sands (SM) and clayey sands (SC). The soils exhibited subgrade CBR values ranging from 3 to 44 percent with the majority of values exceeding 5 percent. The subgrade soils at locations 2, 4, 7, and 10 were visibly wet of optimum moisture content.

CONSTRUCTION CONSIDERATIONS

Although we are not familiar with the full extent of the project details, there are several conditions within the pavement structures that could affect construction of new pavements or other features such as brick walkways. The tar macadam encountered at several locations is a very stable base material; however, this material will not hold up well if attempts are made to mill the surface due to the large size of the coarse aggregate in the material. Locations 6 and 9 had 1.88 and 2.62 inches, respectively, of asphalt pavement directly over the macadam layer. If more than the existing thickness of asphalt is to be removed from the areas, it should be anticipated that the macadam will be disturbed. It may be necessary to intentionally remove some additional depth of the macadam in order to accommodate additional asphalt depth to account for the disturbance of the macadam layer. The concrete pavement was intact and in generally good condition at the locations where it was encountered. The concrete can be milled with standard milling equipment if necessary.

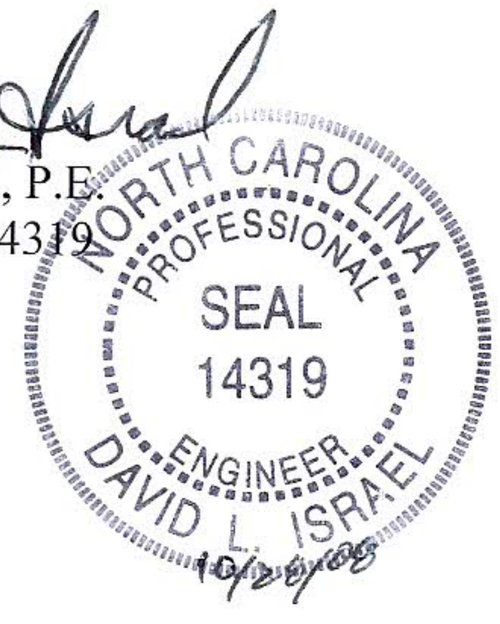
GeoTechnologies appreciates the opportunity to be of service to the Department of Engineering for the City of Rocky Mount, North Carolina. We will be glad to meet with you at your convenience to answer any questions you may have once you have had the opportunity to review the report and the attached data.

Sincerely,

GeoTechnologies, Inc.

David R. Harris
Senior Inspector

David L. Israel, P.E.
NC Reg. No. 14319



WB-DRH/DLI
Attachments

TABLE 1

SUMMARY OF PAVEMENT DEPTHS

Streetscape Project
Rocky Mount, North Carolina
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Location	Depth (in.)	Description	In-Place CBR (%)
1 - SW Main Just North of Nash Street Intersection	0 - 6.25	Asphalt Pavement	
	6.25 - 12.25	Concrete Pavement - Granite Aggregate	
	12.25 - 18	Orange, Gray Fine Sandy CLAY w/ Gravel (CL)	3
2 - SE Main Midway Between Battle and Marigold	0 - 1.75	Asphalt Pavement	
	1.75 - 8.5	CABC Stone	
	8.5 - 18	Orange Slightly Clayey Coarse to Fine SAND (SC)	42
3 - SE Main Just North of Marigold	0 - 4.5	Asphalt Pavement	
	4.5 - 8.5	Tar Macadam	
	8.5 - 16	Gray Fine Sandy CLAY (CL)	10
4 - SW Main North of Sunset Avenue	0 - 7	Asphalt Pavement	
	7 - 11.25	Tar Macadam	
	11.25 - 13	Tan Gray Clayey Medium to Fine SAND (SC)	
	13 - 18	Tan, Gray Medium to Fine Sandy CLAY (CL)	5
5 - SE Main Just North of Tarboro Street	0 - 9.5	Asphalt Pavement	
	9.5 - 13	Tar Macadam	
	13 - 18	Gray Slightly Clayey Silty Fine SAND (SC-SM)	15

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Location	Depth (in.)	Description	In-Place CBR (%)
6 - Falls Road Just North of W Thomas Street	0 - 1.88	Asphalt Pavement	
	1.88 - 9	Tar Macadam	
	9 - 18	Tan Slightly Clayey Medium to Fine SAND (SC)	12
7 - NE Main on the East side of the Median Across from Washington Street	0 - 2.62	Asphalt Pavement	
	2.62 - 8.62	Concrete Pavement (Granite Aggregate)	
	8.62 - 14	Gray Clayey Medium to Fine SAND w/ Gravel (SC)	7
	14 -	Possible Utility	
8 - E Thomas Street Midway Between NE Main and Albermarle Avenue	0 - 3.25	Asphalt Pavement	
	3.25 - 6.62	Concrete Pavement - Granite Aggregate	
	6.62 - 18	Gray, Brown Clayey Coarse to Fine SAND (SC)	8
9 - Falls Road Midway Between W Thomas and Goldeaf Street	0 - 2.62	Asphalt Pavement	
	2.62 - 6.5	Possible Tar Macadam (3" Aggregate)	
	6.5 - 10.5	Clean Aggregate, Some Fines	
	10.5 - 14	Dense Gray Fine SAND (SP)	44
	14 -	Auger Refusal	
10 - NE Main Midway Between E Thomas & Goldleaf Street	0 - 2.75	Asphalt Pavement	
	2.75 - 8.5	Concrete Pavement (Granite Aggregate)	
	7 - 16	Orange Coarse to Fine Sandy Gravel (GP)	
	16 - 19.5	Gray Orange Clayey Medium to Fine SAND (SC)	6
	19.5 -	Very Hard	